

CLAIMS:

1. A system for identifying a potential for financial irregularity in a financial transaction, comprising:
- 5 a first database (18) for storing data on at least one selected transaction;
a processor (20) loaded with a rules engine (22), including a predetermined set of rules for determining a potential for the presence of financial irregularity in at least one selected transaction, the processor being operable to access the data in the database to run the predetermined set of rules in respect of the data and to produce an outcome (116, 124, 132) indicative of the potential for a financial irregularity being present in the transaction.
- 10 2. The system of claim 1 in which the processor is operable to produce numerical outcome for each rule that is transgressed by the transaction.
- 15 3. A system of claim 1 in which the set of rules includes a first group of rules corresponding to client information in the data.
4. The system of claim 1 in which the set of rules includes a second group of rules corresponding to account information in the data.
- 20 5. The system of claim 1 in which the set of rules includes a third group of rules corresponding to transaction information in the data.
- 25 6. The system of claim 1 in which the processor is operable to combine the outcomes of running at least a selection of the rules in the set to produce an overall outcome indicative of the potential for a financial irregularity.

7. The system of claim 1 in which the processor is further operable to apply a weighting function to the outcome of running each rule according to the importance of the rule to the potential for a financial irregularity being present in the transaction.

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8. The system of claim 6 including user input means for varying the weighting function applied to at least one of the rules.

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9. The system of claim 1 including user input means for disabling at least one of the rules.

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10. The system of claim 2 in which the processor includes a routine for applying a threshold value to each outcome, which routine is arranged to generate an output of transgression of the rule if the threshold is crossed.

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11. The system of claim 6 in which the processor includes a routine for applying a threshold value to the overall outcome, which routine is arranged to generate an output indicating the potential for a financial irregularity being present if the threshold is crossed.

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12. The system of claim 1 in which at least one of the rules is run in respect of the data to produce the outcome relative to a pattern of activity data corresponding to the rule.

13. The system of claim 12 including an archive for storing the transaction data, the processor means being arranged to access the archive to establish the said pattern based on previous related transactions.

14. The system of claim 1 in which the set of rules includes rules corresponding to client, account and transaction information, the set of rules being selected from the group comprising:

- 5 a) transaction amount exceeds average transaction amount for the account by a parameterised limit;
- b) transaction amount exceeds average transaction amount for the account by a parameterised percentage;
- c) number of transactions against the account has been exceeded by a
10 parameterised percentage;
- d) transaction amount exceeds account transaction limit;
- e) transaction amount exceeds parameterised limit;
- f) transaction is destined for or has come from a listed country;
- g) transaction is destined for or has come from an OFAC listed country;
- 15 h) i) transaction is for a listed currency;
- ii) transaction is for a listed country/currency combination;
- iii) transaction is destined for or has come from a listed financial institution;
- i) many small deposits followed by a large withdrawal;
- 20 j) activity against an account that the user has identified as being dormant;
- k) balance exceeds a parameterised limit;
- l) many deposits over several branches of the user;
- m) large balance over many accounts or clients;
- 25 n) deposits larger than average for the postcode;
- o) balance larger than average for the postcode;
- p) activity against an account or client where there has been no activity

for a parameterised period; and

q) activity against an account marked as suspicious already.

5 15. The system of claim 7 in which a further weighting function is applied to a predefined collection of rules which are transgressed in respect of the same or related transactions.

10 16. The system of claim 1 in which the financial transaction is a bank transaction.

17. The system of claim 1 in which the financial irregularity is money laundering.

15 18. The system of claim 1 in which the processor includes an extract routine for accessing transaction data from a second database and for transferring the said data to the said first database.

20 19. The system of claim 1 in which the outcome is translated into a user alert indicative of the potential for the presence of a financial irregularity in the transaction.

20. The system of claim 10 in which the said output is a user-readable alert.

25 21. The system of claim 11 in which the said output is a user-readable alert.

22. A method of identifying a potential for financial irregularity in a financial transaction, comprising:

storing data (18) on at least one selected transaction;

running the at least one selected transaction through a predetermined set of rules (22) for detecting a potential for the presence of financial irregularity therein to produce an outcome (116, 124, 132) indicative of the potential for a financial irregularity being present in the transaction.

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23. A method of claim 22 in which a numerical outcome is produced for each rule that is transgressed by the transaction.

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24. The method of claim 22 in which the set of rules includes a first group of rules corresponding to client information in the data.

25. The method of claim 22 in which the set of rules includes a second group of rules corresponding to account information in the data.

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26. The method of claim 22 in which the set of rules includes a third group of rules corresponding to transaction information in the data.

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27. The method of claim 22 in which the outcomes of running at least a selection of the rules in the set is combined to produce an overall outcome indicative of the potential for a financial irregularity.

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28. The method of claim 22 in which a weighting function is applied to the outcome of running each rule according to the importance of the rule to the potential for a financial irregularity being present in the transaction.

29. The method of claim 28 including varying the weighting function applied to at least one of the rules by user input.

30. The method of claim 27 including disabling at least one of the rules by user input.

5 31. The method of claim 22 including applying a threshold value to each outcome and generating an output for transgression of the rule if the threshold is crossed.

10 32. The method of claim 27 including applying a threshold value to the overall outcome and generating an output indicating the potential for a financial irregularity being present if the threshold is crossed.

15 33. The method of claim 22 including running at least one of the rules in respect of the transaction data to produce the outcome relative to a pattern of activity data corresponding to the rule.

34. The method of claim 33 including storing the data in an archive and accessing the archive to establish the said pattern based on previous related transactions.

20 35. The method of claim 22 in which the set of rules include rules corresponding to client, account and transaction information, the set of rules being selected from the group comprising:

a) transaction amount exceeds average transaction amount for the account by a parameterised limit;

25 b) transaction amount exceeds average transaction amount for the account by a parameterised percentage;

c) number of transactions against the account has been exceeded by a

parameterised percentage;

- d) transaction amount exceeds account transaction limit;
- e) transaction amount exceeds parameterised limit;
- f) transaction is destined for or has come from a listed country;
- 5 g) transaction is destined for or has come from an OFAC listed country;
- h) i) transaction is for a listed currency;
- ii) transaction is for a listed country/currency combination;
- iii) transaction is destined for or has come from a listed financial institution;
- 10 i) many small deposits followed by a large withdrawal;
- j) activity against an account that the user has identified as being dormant;
- k) balance exceeds a parameterised limit;
- l) many deposits over several branches of the user;
- 15 m) large balance over many accounts or clients;
- n) deposits larger than average for the postcode;
- o) balance larger than average for the postcode;
- p) activity against an account or client where there has been no activity for a parameterised period; and
- 20 q) activity against an account marked as suspicious already

36. The method of claim 27 including applying a further weighting function to a predefined collection of rules which are transgressed in respect of the same or related transactions.

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37. The method of claim 22 in which the financial transaction is a bank transaction.

producing a user-readable output of the rules if any transgression exceeds a predetermined threshold;

providing a user operable input device by which to set the weights against each rule; and

5 providing a user operable input device by which to set the threshold in respect of the set of rules.

44. A computer-readable medium having computer-executable instructions for performing a method comprising:

10 storing data (18) on at least one selected transaction;

running the at least one selected transaction through a predetermined set of rules (22) for detecting a potential for the presence of financial irregularity therein to produce an outcome (116, 124, 132) indicative of the potential for a financial irregularity being present in the transaction.

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45. The computer readable medium of claim 44 performing the method in which a numerical outcome is produced for each rule that is transgressed by the transaction.

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46. The computer readable medium of claim 44 performing the method in which the set of rules includes a first group of rules corresponding to client information in the data.

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47. The computer readable medium of claim 44 performing the method in which the set of rules includes a second group of rules corresponding to account information in the data.

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48. The computer readable medium of claim 44 performing the method in which the set of rules includes a third group of rules corresponding to transaction information in the data.

5 49. The computer readable medium of claim 44 performing the method in which the outcomes of running at least a selection of the rules in the set is combined to produce an overall outcome indicative of the potential for a financial irregularity.

10 50. The computer readable medium of claim 44 performing the method in which a weighting function is applied to the outcome of running each rule according to the importance of the rule to the potential for a financial irregularity being present in the transaction.

15 51. The computer readable medium of claim 50 performing the method including varying the weighting function applied to at least one of the rules by user input.

20 52. The computer readable medium of claim 44 performing the method including disabling at least one of the rules by user input.

25 53. The computer readable medium of claim 44 performing the method including applying a threshold value to each outcome and generating an output for transgression of the rule if the threshold is crossed.

54. The computer readable medium of claim 49 performing the method including applying a threshold value to the overall outcome and generating an

output indicating the potential for a financial irregularity being present if the threshold is crossed.

55. The computer readable medium of claim 44 performing the method including running at least one of the rules in respect of the transaction data to produce the outcome relative to a pattern of activity data corresponding to the rule.

56. The computer readable medium of claim 55 performing the method including storing the data in an archive and accessing the archive to establish the said pattern based on previous related transactions.

57. The computer readable medium of claim 44 performing the method in which the set of rules include rules corresponding to client, account and transaction information, the set of rules being selected from the group comprising:

a) transaction amount exceeds average transaction amount for the account by a parameterised limit;

b) transaction amount exceeds average transaction amount for the account by a parameterised percentage;

c) number of transactions against the account has been exceeded by a parameterised percentage;

d) transaction amount exceeds account transaction limit;

e) transaction amount exceeds parameterised limit;

f) transaction is destined for or has come from a listed country;

g) transaction is destined for or has come from an OFAC listed country;

h) i) transaction is for a listed currency;

ii) transaction is for a listed country/currency combination;
 iii) transaction is destined for or has come from a listed financial institution;

- i) many small deposits followed by a large withdrawal;
- 5 j) activity against an account that the user has identified as being dormant;
- k) balance exceeds a parameterised limit;
- l) many deposits over several branches of the user;
- m) large balance over many accounts or clients;
- 10 n) deposits larger than average for the postcode;
- o) balance larger than average for the postcode;
- p) activity against an account or client where there has been no activity for a parameterised period; and
- q) activity against an account marked as suspicious already

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58. The computer readable medium of claim 49 performing the method including applying a further weighting function to a predefined collection of rules which are transgressed in respect of the same or related transactions.

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59. The computer readable medium of claim 44 performing the method in which the financial transaction is a bank transaction.

60. The computer readable medium of claim 44 performing the method in which the financial irregularity is money laundering.

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61. The computer readable medium of claim 44 performing the method including extracting transaction data from a second database associated with a

financial application and transferring the said data to the first database.

62. The computer readable medium of claim 44 performing the method in which the outcome is translated into a user alert indicative of the potential for the presence of a financial irregularity in the transaction data.

63. The computer readable medium of claim 53 performing the method including generating the said output as a user-readable alert.

64. The computer readable medium of claim 54 performing the method including generating the said output as a user-readable.

65. A computer-readable medium having computer-executable instructions for performing a method comprising:

extracting data on the transaction from a financial transaction account database and storing the transaction data in a second database;

running the financial transaction through a set of rules for detecting a potential for the presence of a financial irregularity therein by transgression of one or more of the rules and to produce an outcome indicative of the potential for a financial irregularity being present in the transaction;

weighting the outcome of running the financial transaction through the set of rules;

producing a user-readable output of the rules if any transgression exceeds a predetermined threshold;

providing a user operable input device by which to set the weights against each rule; and

providing a user operable input device by which to set the threshold in

1. The first part of the report is a general introduction to the project, which includes a brief history of the project and a statement of the project's purpose.